

ABSTRACT

As a p-type ohmic contact electrode formation technique in a Group II-VI compound semiconductor, there is provided a material for forming an electrode that is low in resistance, stable, and not toxic, and is excellent in productivity, thereby providing an excellent semiconductor element.

A semiconductor electrode material in the form of a material represented by a composition formula $A_xB_yC_z$ (A: at least one element selected from Group 1B metal elements, B: at least one element selected from Group 8 metal elements, C: at least one element selected from S and Se), where X, Y, and Z are such that $X+Y+Z=1$, $0.20 \leq X \leq 0.35$, $0.17 \leq Y \leq 0.30$, and $0.45 \leq Z \leq 0.55$.